

# Lecture Sheet: 03 Bíology (Chapter-13: Food and Nutrítíon) Class: VIII

#### Lipids:

Lipids are organic compounds that contain hydrogen, carbon, and oxygen atoms, which form the framework for the structure and function of living cells.

- Lipid is a compound made up of fatty acid and glycerol.
- The lipids or fatty substances having digested turn into fatty acid and glycerol.
- The fatty acids and glycerol get absorbed in the body through lymph gland situated in villi of intestine.
- 20 types of fatty acids are found in lipids.
- Fatty acid is formed in liver.
- Fatty acids are of two types, such as—1) Unsaturated fatty acids and 2) Saturated fatty acids.
- The food that contains more unsaturated fatty acids is more useful.
- The foods that contain more saturated fatty acids are called fat enriched food.
- 1 gram of fat can yield 9 kilocalorie of energy.

Q. Why is sunflower oil more useful?
Q. Why is chocolate fat enriched food?
Q. If one person eats 500 gm nuts daily, how much energy will he get?

## Types of Lipids:

## Simple Lipids

- 1. Fats: Esters of fatty acids with glycerol. Oils are fats in the liquid state
- 2. Waxes: Esters of fatty acids with higher molecular weight monohydric alcohols

## Complex Lipids

- 1. **Phospholipids**: These are lipids containing, in addition to fatty acids and alcohol, a phosphoric acid residue.
- **2. Glycolipids (glycosphingolipids)**: Lipids containing a fatty acid, sphingosine, and carbohydrate.
- 3. Other complex lipids: Lipids such as sulfolipids and amino lipids. Lipoproteins may also be placed in this category

#### Role of Fats:

Fats play several major roles in our body. Some of the important roles of fats are mentioned below:

- Fats in the correct amounts are necessary for the proper functioning of our body.
- Many fat-soluble vitamins need to be associated with fats in order to be effectively absorbed by the body.
- They are an efficient way to store energy for longer periods.

# Fats deficiency related diseases:

If food lacks in fatty substance, deficiency of fat soluble vitamin occurs in the body which will result in diseases due to the deficiency of vitamin. Such as—

- Skin will get dry and rough that will ruin the beauty of the body.
- The children will suffer form eczema.
- Elderly person lose resistance against skin disease.

Q. Why should we take a correct amount of fat daily?				
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